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# Legislative Audit Division

State of Montana



Report to the Legislature

May 2001

## Information System Audit

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## MSU Banner2000 System

Montana State University

This report provides information regarding application controls over the University's Banner2000 System, and general controls over the related processing environment. It contains recommendations for improving controls over the Banner information system environment.

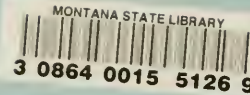
These recommendations address:

- ▶ Restricting Banner access for employees.
- ▶ Updating computing policy and procedure manuals.
- ▶ Eliminating duplicate payment of invoices.
- ▶ Improving payroll input procedures.

Direct comments/inquiries to:  
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## INFORMATION SYSTEM AUDITS

Information System (IS) audits conducted by the Legislative Audit Division are designed to assess controls in an IS environment. IS controls provide assurance over the accuracy, reliability, and integrity of the information processed. From the audit work, a determination is made as to whether controls exist and are operating as designed. In performing the audit work, the audit staff uses audit standards set forth by the United States General Accounting Office.

Members of the IS audit staff hold degrees in disciplines appropriate to the audit process. Areas of expertise include business, accounting and finance.

IS audits are performed as stand-alone audits of IS controls or in conjunction with financial-compliance and/or performance audits conducted by the office. These audits are done under the oversight of the Legislative Audit Committee which is a bicameral and bipartisan standing committee of the Montana Legislature. The committee consists of six members of the Senate and six members of the House of Representatives.

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May 2001

The Legislative Audit Committee  
Of the Montana State Legislature:

This is the report of our information system audit of controls relating to the Banner2000 System operated by Montana State University. We reviewed the University's general and application controls over the Banner2000 System. This report contains recommendations for improving controls related to the system and University procedures. Written responses to our audit recommendations are included in the back of the audit report.

We thank the University for its cooperation and assistance throughout the audit.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Scott A. Seacat".

Scott A. Seacat  
Legislative Auditor



# **Legislative Audit Division**

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## **Information System Audit**

### **MSU Banner2000 System**

**Montana State University**

Ann Walchuk, Legislative Audit Division, was involved in this audit.



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## Appointed and Administrative Officials

### **Montana State University- Bozeman**

Geoffrey Gamble, President  
David Dooley, Interim Provost and Vice President for  
Academic Affairs  
Thomas Stump, Vice President for Administration and Finance  
Thomas McCoy, Vice President for Research, Creative Activities,  
and Technology Transfer  
Leslie Taylor, Legal Counsel  
Virginia Key, Internal Auditor

### **Montana State University- Billings**

Ronald Sexton, Chancellor  
Janie Park, Provost and Academic Vice Chancellor  
Lee Peters, Vice Chancellor of Student Affairs  
Terrie Iverson, Administrative Vice Chancellor  
LeAnn Anderson, Director of Financial Services  
Jim Nielson, Director of Business Services

### **Montana State University- Great Falls College of Technology**

Willard Weaver, Dean  
Mary Ellen Baukol, Assistant Dean for Business and Finance

### **Montana State University- Northern**

Alex Capdeville, Chancellor  
Roger Barber, Vice Chancellor of Academic Affairs



### Introduction

We performed an information system audit of Montana State University's Banner system. Banner is a commercially developed computer application used to administer campus operations. We reviewed application controls over the Banner Financial Aid, Human Resource, Student and Finance modules, and general controls over the University computer environment.

Background information, audit objectives, and audit scope are discussed in Chapter I. Further discussion of the audit issues summarized below is included in Chapters II and III. *Overall, we found that Banner processes information as intended. However, we found weaknesses in access security controls and identified outdated computing policies. We also identified control weaknesses related to payroll data entry at MSU-Billings and invoice data entry at MSU-Bozeman.*

### General Controls

The Banner system is a relational database. In a relational database, data is contained in a number of tables which are linked to each other by common data elements within each table. Database tables were developed for each campus. MSU-Bozeman is responsible for maintaining the Banner system and support services. Banner security and user access accounts for MSU-Bozeman, MSU-Billings, MSU-Great Falls College of Technology, and MSU-Northern is administered by all of the campuses. We reviewed the following general control areas: Banner access security, database administrator access to Banner production data, payroll access, and computing policy and procedures manuals. Audit issues are summarized below.

- ▶ We selected critical forms and processes within each of the modules and reviewed the users with access to change data. We identified employees from each campus with inappropriate change access to the selected forms and processes. The users we recommended MSU restrict or remove include programmers, users that no longer work for MSU or have changed job positions with MSU, and users assigned to Banner classes which grant them more access than needed for their job duties.

## Report Summary

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- ▶ Database administrators (DBAs) in Bozeman maintain the database tables which hold Banner data for all of the campuses. We identified shared user IDs that were created so three DBAs can log on to the system as users to research processing problems on Banner. The shared IDs allow access to critical Banner forms and processes that allow them to change, add or delete accounting and payroll data.
- ▶ MSU-Bozeman's Facilities Services department uses a separate software system to record and feed payroll data to the Banner Human Resources System (HRS). Personnel indicated Banner HRS does not accommodate Facilities Services union or internal payroll policies. As a result, for every payroll processed there are discrepancies between HRS and Facilities Services leave balances that must be corrected. To efficiently resolve the discrepancies, a Facilities Service's information systems employee was given access to make adjustments to employee leave balances in Banner HRS for the Facilities Services department, as well as for all MSU campuses.
- ▶ We reviewed the Computing Policy Manual to determine if policies are in place to outline computing management and university security requirements, and whether MSU is in compliance with the policies. The Computing Policy Manual is outdated, and many of the policies listed do not correspond with the current computing environment. Without current policies management is not able to monitor compliance and employees do not have guidelines to follow.

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### Banner Application Controls

Application controls are specific to a given computer application or a set of programs that accomplish a specific function. We evaluated application controls specific to Banner modules within Banner Finance, such as Accounts Receivable and Accounts Payable, and also the Financial Aid, HRS, and Student Systems. Audit issues are summarized below.

- ▶ Vendor invoice information is entered in Banner based on documentation received from departments or directly from the vendor. Banner contains a system edit which will not allow the entry of two identical numbers in the invoice number field. However, Bozeman personnel do not record the invoice number in the designated Banner field. Instead, they record the invoice number in a text field associated with the transaction where there are no validation edits in place to detect whether the number has

## Report Summary

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already been recorded. We reviewed five duplicate payments that were corrected within a two-week period. Procedures should be in place to ensure payment is issued based on original invoice, and data is recorded accurately and correctly, using the system functionality.

- ▶ Each campus is responsible for entering and processing its own payroll. In some instances, MSU-Billings enters the total amount paid as the employee's hourly wage for a pay period instead of entering the hours worked and the corresponding hourly rate (i.e. employees are recorded on Banner as working one hour at an hourly wage of \$208). Employee time worked should be accurately recorded on time sheets and in Banner. Summarizing time worked does not provide the support needed to reconcile payroll at a detail level, and makes it more difficult for personnel to identify errors in wages.



# Chapter I - Introduction

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## Introduction

We performed an information system audit of Montana State University's Banner2000 (Banner) system. Banner is a commercially developed computer application used to administer campus operations. The Banner System is a relational database. In a relational database, data is contained in a number of tables which are linked to each other by common data elements within each table. Database tables were developed for each of the Bozeman, Great Falls, Havre, and Billings campuses. MSU-Bozeman is responsible for maintaining the Banner system and support services. Banner security and user access accounts is administered by all of the campuses.

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## System Background

The Banner System is made up of many interrelated components. MSU-Bozeman and the affiliated campuses use four Banner components.

The **Banner Finance System** (Finance) includes the General Ledger, Accounts Receivable, Accounts Payable, Purchasing, Fixed Assets and Research Accounting modules. The Finance system allows MSU to track, maintain, and process its financial information. The General Ledger feeds financial information to the Statewide Accounting, Budgeting, and Human Resource System (SABHRS).

The **Banner Human Resource System** (HRS) includes information needed to administer the University's human resources, such as employment and compensation; position control and staffing; applicant tracking, requisitioning, and processing; EEO, W-2, and 1099-R reporting; payroll processing; and administration of benefits and leave.

The **Banner Financial Aid System** (FAS) handles the information processing activities of the Financial Aid Office. Banner performs calculations to support budgeting, student needs analysis, and benefit packaging.

The **Banner Student System** (Student) maintains information related to the student population, such as scheduling, registration, calculating tuition and fees, accounts receivable, and academic

## Chapter I - Introduction

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history. The Web for Students module was implemented in November 2000 and allows students and faculty to access information such as student registration, financial aid and class schedules via the web.

Within each of the four components are integrated modules each campus chose to implement.

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### Organization of Report

This report is organized into three chapters. Chapter I provides an introduction and background on Banner. Chapter II addresses general controls over the information system processing environment. Chapter III documents concerns relating to application controls or data processed through the system.

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### Audit Objectives

The Banner system is used to process and report MSU's financial and management data. The objective of our audit included identifying and testing selected processes and documenting how the different Banner modules are used by each campus. Our objective is to provide assurances over identified controls and to share our understanding of system processes and controls with others having a need for this information. The information gathered during the audit is shared with financial-compliance audit staff to consider during their audit work.

The objectives of this audit were to:

1. Follow-up and determine implementation status of recommendations from our MSU Banner2000 System (00DP-04) audit issued in March 2000.
2. Obtain an understanding of how each campus is using Banner modules.
3. Evaluate system access controls over financial data and system processes.
4. Evaluate specific input, processing and output controls intended to help ensure data accuracy in Banner and SABHRS.
5. Evaluate general controls to ensure physical security of system hardware, system access is controlled, and that procedures and



policies are in place to control and protect MSU computing operations.

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### **Audit Scope and Methodology**

The audit was conducted in accordance with governmental auditing standards published by the United States General Accounting Office. We evaluated controls using criteria established by the AICPA and the information technology industry. We reviewed general controls over MSU-Bozeman's computing environment and application controls over selected Banner modules.

We gathered information regarding the modules implemented by the MSU campuses. Audit staff spent time at each campus to obtain an understanding of how each one uses the different Banner components. We interviewed personnel, observed personnel perform job duties, and reviewed documentation related to processing of financial and human resource information, and reviewed selected data tables for content. We evaluated controls over employee access to the system and data to determine appropriateness based on the job duties assigned.

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### **Compliance**

We audited system processing to assess compliance with certain state and federal laws. We verified tax withholding rates on Banner agree with state and federal rates and retirement withholding rates comply with state law. We verified sick and annual leave are accrued at rates set by Board of Regent policies. We determined MSU is in compliance with laws applicable to the processing of payroll as tested.

We also verified that student registration fees charged through Banner are in compliance with fees established by the Board of Regents. We determined that Banner assesses student fees per credit accurately based on the approved Board of Regent fee schedule.

## Chapter I - Introduction

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### Conclusion

In conclusion, we determined that overall, Banner processes information as intended. However, we identified weaknesses in access security controls over the Banner system and identified outdated computing policies. We also identified control weaknesses related to payroll data entry at MSU-Billings and invoice data entry at MSU-Bozeman. These issues are discussed in the following chapters.

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### Prior Audit Recommendations

Our previous audit report (MSU Banner2000 System, 00DP-04) contained seven recommendations. MSU-Bozeman implemented three, partially implemented three, and one recommendation is not implemented.

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### Recommendations Partially Implemented

We recommended MSU assign employees system access that is appropriate based on their job duties. Access to some of the system information was changed appropriately, but we identified employees who still have inappropriate change access.

We also recommended MSU separate access to incompatible payroll processing functions. MSU removed access so employees who establish new employee records and enter time sheet information do not have the ability to process payroll and print checks. However, employees that process payroll and print checks still have access to establish new employees and enter time sheet information. Recommendation #1 on page 10, addresses employees who should have change access removed.

We recommended MSU establish written policies over payroll input, authorization, and reconciliation procedures. MSU-Bozeman documented procedures for the central human resource employees, but have not completed policies specific to department authorization and reconciliation procedures. MSU is working to complete policies and procedures specific to the department payroll responsibilities. The progress of this documentation will be reviewed during the next biannual audit, and we make no further recommendation at this time.

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**Recommendation Not Implemented**

We recommended MSU restrict employee access among the four campuses or develop compensating controls to monitor access. The Banner HR and Finance Systems share data from all four campuses. An MSU-Bozeman employee with access to change employment benefits has the ability to change benefits for any of the employees at the Billings, Havre, or Great Falls campuses. The Banner access restricts employees to certain types of transactions, but does not distinguish between campuses. In response to our previous recommendation, university personnel stated, "...if implemented, would put MSU in direct opposition with the mandates and charges from the Board of Regents and the Commissioner of Higher Education (CHE)." We contacted CHE and are told that the directive is for a common chart of accounts, not shared access among campuses.

The Banner software provides the capability to restrict user access to data within particular areas of the system through Banner organizational security. MSU personnel state that it would be too labor intensive to maintain this descriptive level of access for all employees at each campus. MSU has not implemented compensating controls that specifically address this recommendation. The current status of reconciliation procedures does not provide controls over changes to data.

The shared access increases MSU's exposure to unauthorized changes of data. We have reported this concern to MSU and they have made the decision that the costs of implementing this recommendation outweigh the benefits. We will continue to review this security weakness in the next MSU Banner system audit.



## Chapter II - General Controls

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### Introduction

A general control review provides information about the environment in which the computer systems operate and includes an evaluation of controls over the computer application. Access controls provide electronic safeguards designed to protect computer systems and data. Proper access controls help prevent and detect deliberate or accidental errors caused by improper use or manipulation of data, programs, and/or computer resources. Appropriate access based on job duties prevents users from inadvertently or willfully executing programs or changing data unrelated to their job.

We reviewed access controls relating to the different layers of the computing environment. To effectively control access to Banner data, MSU must adequately control access to the systems that connect Banner users and allow them to share data. We also reviewed current policies to determine if MSU has documented policies and procedures in place to assure security of data and information technology resources. We toured the data processing center and determined physical security controls are in place over the MSU-Bozeman data center. This chapter discusses issues related to our general control review.

### Inappropriate Banner Access Security

The MSU-Bozeman personnel are responsible for implementing employee access to Banner for all four campuses; designated employees from each campus notify Bozeman security personnel as to the level of access to grant their employees. Banner has a multi-level security structure. Data is collected in the form of tables, such as student and financial data. Access levels define the tables available and the functions that can be performed in those tables. Banner forms, screens, and processes are assigned to user classes. Users are assigned to a class or multiple classes based on their job duties.

We selected critical forms or processes within each of the modules and reviewed the users with the ability to change data. We interviewed personnel from each campus to determine which employees should have change access to critical forms we selected.

## **Chapter II - General Controls**

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The following table summarizes users with inappropriate access to the forms reviewed, allowing the ability to change data.

**Table 1**  
**Employees Granted Change Access**

	<i>Current Access Required</i>	<i>Current Access Granted</i>	<i>Recommend Access Removal</i>
<b>Finance System:</b>			
▪ Establish accounting structure	31	40	9
▪ Change vendor information	69	79	10
▪ Change asset information	18	25	7
▪ Change payment information	81	96	15
▪ Change account balance information	68	82	14
▪ Designate whether student issued refund check	43	57	14
<b>Human Resource System:</b>			
▪ Establish position and salary information	28	75	47
▪ Allows authorization & status changes to position	32	78	46
▪ Mass time entry of hours	21	63	42
▪ Enter/change hours worked	25	64	39
▪ Adjust leave balance information	29	67	38
▪ Establish tax calculations	9	63	54
▪ Define employee leave benefits	8	18	10
▪ Process to calculate leave hours taken	16	63	47
▪ Process to calculate earning deductions and taxes	16	63	47
<b>Financial Aid System:</b>			
▪ Identifies requirements that must be met before aid disbursement	45	53	8
▪ Maintains aid information for an applicant	45	53	8
▪ Establishes rules that help determine eligibility for aid	27	38	11
▪ Prioritizes funding sources	27	37	10
▪ Change student financial aid records	46	53	7
<b>Student System:</b>			
▪ Establish registration fees	15	43	28
▪ Maintain class scheduling and waive class fees	44	127	83

**Source:** Compiled by the Legislative Audit Division based on data from the Banner2000 System.

## Chapter II - General Controls

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In our prior audit we identified Bozeman employees with inappropriate access to these forms and recommended that they be removed. MSU has removed some of the employee access we identified and are in the process of reevaluating user access. Because we also reviewed employee access at the affiliated campuses and selected additional forms to review this audit, we identified additional employees that should have inappropriate access removed. The users we recommended MSU restrict or remove include programmers, users that no longer work for MSU or have changed job positions within MSU, and users in Banner security classes which grant them more access than needed for their job duties.

We did not identify questionable changes to data. However, inadequate security controls create the potential for unauthorized or inappropriate modifications. MSU personnel plan to implement controls to periodically review employee access and remove change access for employees no longer needing it to perform their job.

### **Recommendation #1**

**We recommend MSU ensure change access is restricted to only those individuals needing it in the performance of their jobs.**

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### **Database Administrator Access to Banner Production Data**

Database administrators (DBAs) in Bozeman maintain the database tables which hold Banner data for all of the campuses. In our review of access to critical Banner forms we identified shared user IDs that were created so three DBAs can log on to the system as users to research processing problems on Banner. The shared IDs allow access to critical Banner forms and processes that could allow them to change, add or delete accounting and payroll data.

Personnel stated they require access to research problems with specific Banner forms and processes during Banner upgrade processes. However, DBAs may not have the accounting knowledge necessary to make appropriate decisions on changes to financial or



HR data and could inadvertently make incorrect changes to the data. DBA access to the Banner forms should be limited to "inquiry only," researching problems without becoming a user of the system.

Industry standards recommend that system support personnel have unlimited access to a test database, which is a clone of the production environment, and have "inquiry only" access to production data. All problems should be resolved and tested in the test database, and then changes can be moved to the production environment. Furthermore, the shared IDs are not assigned to a specific person and the DBAs share the password. Therefore, there is no user accountability connected to data changes made with the ID.

### **Recommendation #2**

**We recommend MSU-Bozeman:**

- A. Restrict DBAs Banner access to "inquiry only" in the production database.**
- B. Remove shared user IDs and passwords that allow access to change Banner data.**

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### **Inappropriate Payroll Access**

MSU-Bozeman's Facilities Services department uses a software system to record and feed payroll data to the Banner Human Resource System (HRS). Due to union agreements and Facilities Services internal payroll policies, the Facilities Services system uses different time recording and compensatory time processes than Banner HRS. As a result, for every payroll processed there are discrepancies between HRS and Facilities Services leave balances that must be corrected. Normally, when a department identifies a payroll error it submits a form to Personnel and Payroll Services. However, to efficiently resolve the discrepancies, a Facilities Service's employee was given access to make adjustments to employee leave balances in Banner HRS. This employee is not a payroll officer, but an information system's employee.

## Chapter II - General Controls

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The access granted does not restrict the Facilities Service's employee to adjusting leave balances within their department, but also provides access to all MSU Bozeman, Billings, Great Falls, and Havre campus employees. MSU personnel stated that it is easier for Facilities Services to correct the errors themselves, than it is for them to fill out and submit a form for every identified error.

The University of Montana (UM) uses the same version of Banner as MSU. We contacted UM to determine whether union agreements are incorporated into the UM Banner programming, rather than maintaining multiple time reporting systems. According to UM, programming has been modified to accommodate union agreements.

The Banner access currently granted to Facilities Services allows the employee more access than needed to perform the job responsibilities. Using one payroll reporting system that accommodates varying time reporting situations would alleviate discrepancies between systems and the need for adjustments.

### **Recommendation #3**

**We recommend that MSU-Bozeman:**

- A. Remove Facilities Services access to the Banner HR data, and**
- B. Coordinate with UM to review Banner programming potential to accommodate union agreements.**

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### **Computing Policy Manual**

During the audit we reviewed MSU's Computing Policy Manual to determine if policies are in place to outline computing management and security requirements, and whether MSU is in compliance with the policies. The Computing Policy Manual is outdated and many of the policies listed do not correspond with the current computing environment. For example, the manual references advisory committees that are no longer operational, system enhancement and

## Chapter II - General Controls

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security procedures for systems no longer used by MSU, and does not include any mention of the current Banner systems.

Industry standards state that adequate policies, procedures, and standards must exist to serve as a basis for establishing accountability and responsibility for an adequate level of security over all data and IT resources. This includes, but is not limited to, developing and maintaining written internal policies. Management should communicate its objectives to ensure user awareness of security and internal control policies and management directives. Policies provide direction and a control framework throughout an organization. Without current policies management is not able to monitor compliance and employees do not have guidelines to follow.

MSU-Bozeman has personnel responsible for maintaining the security of the various system environments, but complete procedures have not been documented. MSU personnel stated that they have not had the resources available to dedicate to updating and maintaining the computing policies. Staff resources were occupied with implementing and upgrading the Banner modules, and converting an operating system. MSU personnel acknowledge that the policies are outdated and indicate they would like to implement policies which encompass all four campuses because the computing environment has become so interrelated.

### **Recommendation #4**

**We recommend MSU update its computing policy manual to ensure an adequate level of security for its data and information technology resources.**



# Chapter III - Banner Application Controls

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## Introduction

Application controls are specific to a given computer application or a set of programs that accomplish a specific function. We evaluated application controls specific to Banner data input, processing and output. This chapter discusses concerns relating to Banner components we reviewed and how the data processes through these systems. The Banner Finance System is updated by modules within Banner Finance, such as Accounts Receivable and Accounts Payable, and is also updated by the FAS, HRS and Student Systems. In November 2000, MSU upgraded the Banner system to version 4. We performed selected testing on the Banner components to determine how data is transferred between the modules and ultimately updates SABHRS.

## Duplicate Payment of Invoices

MSU-Bozeman business office personnel process the required financial transactions to pay vendors. Vendor invoice information is entered in Banner based on documentation received from departments or directly from the vendor. Banner contains a system edit which will not allow the entry of two identical numbers in the invoice number field. However, Bozeman personnel do not record the invoice number in the designated Banner field. Instead, they record the invoice number in a text field associated with the transaction, bypassing the system edit to prevent duplicate invoice entry.

Personnel stated that they do not enter invoice numbers in the designated field because the field is too small to record some of the longer invoice numbers they receive, and the system does not differentiate between invoices entered by different campuses. Since the system edit is bypassed, invoice entry can be duplicated when the business office receives more than one copy of an invoice. For example, a department and vendor may both send an invoice to the business office, or a vendor may send more than one statement. In these instances, duplicate invoices process and duplicate payments are mailed to vendors.

The Bozeman business office does not have procedures in place to verify invoice payments are not duplicated, and rely on the departments or vendor to notify them when an overpayment occurs.

## Chapter III - Banner Application Controls

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If a duplicate is identified, one of the warrants must be retrieved and canceled, and the system payment data must be corrected. We confirmed recent duplicate payments that had been identified and canceled. We were unable to determine the number of duplicate payments because of the university's use of the text field. Procedures should be in place to ensure payment is issued once, based on original invoice, and payments are recorded accurately and correctly using the system functionality. Since MSU upgraded Banner, the invoice number field allows the entry of longer numbers. If invoice numbers are recorded in the designated field, the system will not allow duplicate invoices to be entered.

Each campus is responsible for entering its own invoice information, but the Accounts Payable data tables are shared by all four campuses. This can create problems distinguishing invoice numbers between campuses. Numbering standards or procedures could be adopted so invoice numbers are differentiated for each campus, such as all Bozeman invoices starting with a "BZ." This would improve controls and standardize the entry of invoice information.

### **Recommendation #5**

**We recommend MSU establish procedures to ensure invoice processing is not duplicated.**

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### **MSU-Billings Payroll Input Procedures**

During the audit, we visited each campus and documented controls and procedures related to how each campus used the different Banner modules. Each campus is responsible for entering and processing its own payroll. In some instances, MSU-Billings enters the total amount paid as the employee's hourly wage for a pay period instead of entering the hours worked and corresponding hourly rate. For example, we identified instances where employees are recorded on Banner as working one hour at an hourly wage ranging from \$24.00 to \$517.50.

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## Chapter III - Banner Application Controls

MSU-Billings personnel explained there are several different circumstances when time is entered this way. Instead of recording hours worked for salaried positions, such as teacher assistants, the payroll office takes the total salary divided by the pay periods in the semester and uses the figure as the hourly rate (i.e. \$500 salary/ 4 pay periods = \$125). Some departments only provide the payroll office with the gross total amount paid, and not the hours worked, so the total amount is recorded as an hourly wage for one hour. Personnel stated that it is more convenient to record the time as a total instead of setting up hourly wages and tracking the time worked.

Employee time worked should be accurately recorded on timesheets and in Banner. Summarizing the time worked does not provide the support needed to reconcile payroll at a detail level, and makes it more difficult for personnel to identify errors in wages. MSU-Billings financial aid personnel are having difficulties reconciling student work study reports. The way MSU-Billings is recording time creates an inaccurate representation of time worked and bypasses system edits linked to the number of hours an employee works. For example, once a student exceeds their allowable work study hours they are classified as a department employee.

### **Recommendation #6**

**We recommend MSU-Billings use time reporting and data entry procedures which accurately reflect the employee's wages and time worked.**





## Agency Response





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May 18, 2001

MAY 24 2001

Mr. Scott Seacat  
Legislative Auditor  
Legislative Audit Division  
State Capital, Room 135  
P.O. Box 201705  
Helena, MT 59620-1705

Dear Mr. Seacat:

Please find enclosed Montana State University's responses to the Legislative Audit Division's recommendations described in the narrative segment of the April 2001 Information Systems Audit Report.

Montana State University appreciates the efforts put forth by the Legislative Auditors during the audit of the MSU Banner2000 system. We share many of the concerns outlined in the report, and we believe that this audit will help us to better manage our Information Technology resources.

Sincerely,

A handwritten signature in dark ink, appearing to read "Geoffrey Gamble". The signature is fluid and cursive, with a large initial "G" and "G".

Geoffrey Gamble  
President

Enclosure

**Montana State University**  
Response to Audit Recommendations

**Recommendation #1**

Ensure change access is restricted to only those individuals needing it in the performance of their jobs.

**MSU concurs.**

Inappropriate access identified by the Legislative Auditors will be removed by June 30, 2001.

**Recommendation #2**

Restrict DBAs Banner Access to "inquiry only" in the production database.

Remove shared user ID's and passwords that allow access to change Banner Data.

**MSU partially concurs.**

The Legislative Auditors recommend an ideal internal control environment for DBAs. However, MSU does not have the staff or hardware resources to conduct business efficiently within the structure recommended by the Legislative Auditors. It is necessary to provide DBA access to production data to resolve problems.

As a compensating control, shared user IDs and passwords have been removed and replaced with accounts containing the usernames of the DBAs. This compensating control established DBA personal accountability and provides an audit trail of data changed within the Banner system.

**Recommendation #3**

Remove Facilities Services access to the Banner HR data.

Coordinate with UM to review Banner programming potential and accommodate union agreements.

**MSU partially concurs.**

One Facilities Services employee has access in Banner to modify employees' accrued vacation and sick hours. Banner does not in some instances calculate correct amounts for union employees. Montana State would like to limit that employee's access only to Facilities Services staff, but that is not presently feasible. It is more efficient for facilities to monitor the leave balances of their staff. A report that will track by user name changes made by the Facilities Services employee will be developed.

In the conversion to Banner, MSU followed Banner consultants' advice to avoid making modifications to Banner programming. Modifications are very expensive to create, test and maintain. Monitoring the activity of the Facilities Services employee with the report noted above is a more cost effective resolution in comparison to modifying baseline banner.

**Recommendation #4**

MSU should update its computing policy manual to ensure an adequate level of security for its data and information technology resources.

**MSU concurs.**

When the Banner hardware and software systems were put into production, most of the policies governing security of MSU's previous administrative systems became obsolete. This occurred not just because the specific hardware and software systems changed, but also because the scope of the administrative systems was broadened to include all four MSU campuses. During the Banner implementation, and in the early months of the new production system, a conscious decision was made to delay the development of new policies until IT staff and functional area specialists had developed a thorough understanding of the Banner environment.

In the interim, ITC implemented compensating controls in the form of informal oral and written (mostly e-mail) agreements on operational and security guidelines. MSU has begun documenting new policy.

**Recommendation #5**

We recommend MSU establish procedures to ensure invoice processing is not duplicated.

**MSU concurs.**

MSU-Bozeman's Controller and Internal Auditor are working together to minimize the risk of duplicate payments.

**Recommendation #6**

MSU-Billings should use time reporting and data entry procedures which accurately reflect the employee's wages and time worked.

**MSU partially concurs.**

The Banner Human Resources time entry screen has a field that allows time to be input as an hourly **or** a unit rate. The field is used as an hourly rate for regular pay for all employees. However, it is also appropriately used as a unit rate for various types of earnings. For example, a salaried employee earning extra compensation may be paid a flat rate over one or many pay periods. Graduate and teaching assistants are considered salaried employees and are paid with a unit rate.

We concur that there were instances when payroll staff used this field to pay a lump sum amount to hourly employees. The employee was paid the correct amount; however, using the field in this manner caused inaccurate work study reports. This issue has been addressed and the hourly time worked will be reported correctly in the future.



